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ABSTRACT

This summary report provides a brief description of the development of a distance learning curriculum package by the School of Librarianship and Information Studies at Newcastle upon Tyne Polytechnic, which was designed to teach the skills of presenting, analyzing, and evaluating statistical information to middle-management-level librarians and information officers. The development of both the pilot course and subsequent full-scale course is summarized; the development schedule and course outline are presented; and conclusions are discussed. It is concluded that the project had demonstrated the possibility of developing a distance learning course in data presentation and had established a model that can be used in other subject areas in librarianship and other fields. Listings of the PICKUP (Professional, Industrial, and Commercial Updating) regional development agents, and of the objectives of the Further Education Unit (FEU) and its board of management members are also provided. (KM)

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STATISTICS FOR LIBRARIANS: A DISTANCE LEARNING PACKAGE

A Summary

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FEU/PICKUP

PROJECT REPORT

STATISTICS FOR LIBRARIANS: A DISTANCE LEARNING PACKAGE

A Summary

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Further Education Unit

Professional, Industrial and Commercial Updating

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Dear Sir/Madam

STATISTICS FOR LIBRARIANS: A DISTANCE LEARNING PACKAGE

Enclosed is a summary report describing an FEU/PICKUP project which involved the development and piloting of a distance learning package for librarians.

The package was developed under the direction of Mrs E Blackie of Newcastle Polytechnic; it is now available commercially from the Polytechnic.

Students of distance learning will not be surprised to see that the time allowed for the development and preparation of the pilot material was underestimated; and they will be familiar with the other problems described in the summary. Generally, however, this project adds to the growing amount of distance learning material now being developed for adult updating, the prime objective of PICKUP. Equally, it describes the processes necessary to develop, pilot, produce and promote this type of course. Those who wish to undertake similar ventures should find it useful.

Yours faithfully

Jack Mansell

JACK MANSELL
Chief Officer

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Statistics for Librarians: A Distance Learning Package

Introduction

The FEU/PICKUP project 'Distance Learning Package on Statistics for Librarians' was undertaken by the School of Librarianship and Information Studies at Newcastle upon Tyne Polytechnic. The full report is available from the FEU. The course material can be purchased from the polytechnic.

The project was supported by a PICKUP grant which paid for the services of a research worker to assist in the preparation, administration and evaluation of the project and its material.

Background

The aim of the project was to develop a distance learning package teaching the skills of presenting, analysing and evaluating statistical information to librarians and information officers who wish to ennance their knowledge but are unable to attend full or part-time courses owing to economic strictures or difficulty in obtaining time off work. The course was aimed at the middle management level, (although students recruited ranged from the level of Assistant Librarian to Chief Librarian).

Development schedule

The time-scale for the development of the project was:

Oct - Dec 82	Preparation of curriculum and content of package. Recruitment of volunteers.
Jan - Apr 83	Pilot course.
Apr - Aug 83	Evaluation of pilot course; re-editing; recruitment of students for September course.
Sept - Dec 83	Full-scale course.

Jan - Mar 84 Evaluation of full-scale course and preparation of final report.

The pilot course

A 13 week course was planned, comprising nine separate teaching units and involving the students in four or five hours' study per week. The total study time was 57 hours. There were three tutor-marked tests (which did not form part of the final assessment), an assignment and an end of course assessment. The tests covered both qualitative and quantitative data.

Recruitment

28 volunteers were recruited for the pilot course; these proved to be an accurate reflection of the eventual target group in terms of the students' widespread geographical location, qualifications, experience and reasons for following the course.

Administration and evaluation of the pilot course

The time required for planning and producing printed material was far greater than anticipated. In addition to staff time spent in planning and writing the course, due allowance for the production of course material was not made, the greatest problem being the reproduction of graphic artwork. This caused delays in distribution and subsequently affected submission dates for assessments. The students' evaluation of the course was closely monitored and this information was used when re-editing took place. Unfortunately not all students were reliable in returning evaluation sheets.

Certification

Students who successfully completed the pilot course were awarded a Polytechnic Transcript; a Polytechnic Certificate was awarded to those completing subsequent courses.

Recruitment to September (full-scale) course

The most effective recruitment was via advertisements placed in

professional journals rather than through mailing shots to academic and public libraries. 25 places were filled well before the commencement of the course.

The revised course

The revised (September) course kept mainly to the curriculum design of the pilot course but it was rewritten following comments raised in the students' evaluation sheets. Criticism relating to the computer print-out was met by devising a separate computer pack, independent of the units, and which could be readily updated if required. The section of the unit concerning semi-logarithmic graphs was also completely rewritten and expanded. An annotated bibliography was introduced in preference to a prescribed reading list.

Production of course material

Material for the pilot course was produced by word processor but, for the full-scale courses, it was typeset. The transfer from word processing to typesetting can, however, generate new mistakes and further proof-reading was therefore necessary. It was felt that the improvement in presentation by typesetting did not compensate for the additional time spent in rechecking material.

Course outline

WEEK	UNIT	TOPICS
1	Introduction	Why study Statistics? Aims of the course. Notes for students.
	A	Variables and their observation; qualitative and quantitative data; data collection.
2	B	Qualitative data I Tables of data; order of data within the table; approximations; percentage values.

3	C	Qualitative data II Pictograms; comparative pictograms; simple bar charts; simple column charts.
4	D	Qualitative data III Component bar and column charts; 100% bar and column charts; grouped bar and column cnarts; pie charts.
5		**Test on Qualitative Data**
6	E	Quantitative data I Arrays; frequency tables; histograms; frequency polygons.
7	F	Quantitative data II Relative frequency tables and histograms; cumulative frequency tables and graphs.
8	G	Quantitative data III Grouped frequency tables, histograms and polygons; cumulative frequency tables and graphs for grouped data.
9		**Test on Quantitative Data**
10	H	Qualitative/Quantitative data Line graphs, surface graphs, semi-logarithmic graphs.
11	I	Qualitative/Quantitative data Tables of raw data; correlation tables; scatter diagrams.
12		**Test on Mixed Data**
13		**End of course assessment.**

Costing and fees

Costing was based upon an estimation of staff time (including development) and the production costs of the course material. In the estimation of both staff and production costs, calculations were based on the package being used for 10 courses (or 250 students) before redevelopment was necessary. A student fee of £40 was thus derived which compared well with Open University and other distance learning courses.

Student contact

Contact was by post and telephone. It proved to be well worthwhile to send correspondence by first class mail; telephone contact, when used, was welcomed by students. There were few calls from the students to the Polytechnic.

Completion/Drop out rates

18 out of 28 students completed the pilot course and 16 out of 25 the revised (September) course. The main stated reasons for non-completion were extreme pressure at work or domestic problems. It was also believed that some students had enrolled merely to obtain the course material and were not concerned with certification.

Course title

The title for the course, 'Statistics for Librarians - Presentation of Data,' was chosen as it was considered that this subject would readily lend itself to a distance learning course and that there was a perceived demand for librarians and information officers to become more aware of the availability of information technology in handling large quanities of data. A number of students, however, indicated that the course did not always meet their expectations. It was, for instance, significant that several complained that there was insufficient mathematical statistics. Certain inferences concerning the emphasis of the course were obviously drawn from the wording of the title.

Conclusions and evaluation

The project has demonstrated the possibility of developing a distance learning course in data presentation and has established a model which can be used in other subject areas in librarianship and other fields. It has also enabled a polytechnic course to reach overseas students (a full-scale course included a student from Hong Kong and enquiries have been received from Singapore, India, Kenya, Holland and Belgium). In addition to the choice of title, mentioned above, another area of concern is identifying the appropriate market for such a course, since only about 150 enquiries have been received out of a total of over 7000 potential students, and there was a drop-out rate of approximately 35%. It is therefore intended that for future courses, more systematic market research will be undertaken to determine the most suitable format. The course team will, for instance, be considering whether an open learning package will reach more potential students than a tutor-guided course.

FEU

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The objects for which **The Further Education Unit (FEU)** is established are to promote, encourage and develop the efficient provision of further education in the United Kingdom and for that purpose
a) to review and evaluate the range of existing further education curricula and programmes and to identify overlap, duplication, deficiencies and inconsistencies therein;
b) to determine priorities for action to improve the provision of further education and to make recommendations as to how such improvements can be effected;
c) to carry out studies in further education and to support investigations of and experimentation in, and the development of further education curricula and to contribute to and assist in the evaluation of initiative in further education;
d) to disseminate and publish information and to assist in the dissemination and publication of information about recommendations for and experiments and developments in further education.